

The Citizen Forester

JANUARY 2015

The Benefits of Using Conifers in the Urban Landscape: An Introduction

By J. Casey Clapp and Rick W. Harper

Urban foresters and arborists working in New England have much to consider when it comes to deciding about the tree species that should be planted along community streets and greenways, as well as in landscapes and parks. From wintertime shading to species diversity, and a myriad of considerations in-between, our urban forests require thought and attention to be maintained in a healthy manner and thus provide us with invaluable ecosystem services. Many of these services are, after all, vitally important and include carbon sequestration, wildlife habitat, privacy screening, and storm water abatement through the interception of rainfall. In this two-part article series, we will explore the uses and benefits associated with the installation of evergreen conifers in the urban landscape.

Year-round leaf cover, intuitively, has been shown to provide year-round ecosystem services. The vast majority of coniferous trees in the Northeast are evergreen, and that means that many of the aforementioned ecosystem services are offered on a 12-month basis. Many of the benefits derived from deciduous trees, such as pollution absorption, privacy screening, thermal buffering, and rainwater interception, decrease to negligible levels during the leaf-off season. The foliage of evergreen coniferous trees, however, continues to offer these

benefits throughout the whole year. Notably, conifers continue to intercept and store rainwater, helping to reduce runoff at a time when soils may be frozen and surface water movement may be particularly acute. Studies show that evergreen trees can intercept and store nearly 50 percent more storm water annually than comparably-sized deciduous trees. Their evergreen foliage also continually absorbs important urban pollutants like ozone, carbon dioxide, and

particulate matter (microscopic dust) during drought conditions and during the winter season, two important periods when ozone is being emitted due to the increased use of energy to cool and warm buildings. In addition to these important ecosystem services being derived year-round, evergreen conifers may add some diversity to the built environment.

With nearly 50% of our street trees in New England being comprised of *Acer* spp., it is obvious that our northeastern urban forests demonstrate a uniformity that is notoriously unsustainable. Urban planting recommendations pertaining to species diversification vary and include the following:

- No more than 10% of any one species in an urban forest;
- No more than 5% any one species and 10% of any one genus;
- No more than 10% of any one species, 20% of any one genus, and 30% of any one family in the urban forest.

By simply planting conifers in our urban landscapes we can help to address this diversity deficit and “spread the risks” related to insects and diseases that threaten to devastate our urban tree populations – often one species at a time. We have seen firsthand, after all, the large numbers of urban tree populations that have been lost as



Evergreen coniferous hedges provide year-round privacy in an urban setting.

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The Benefits of Using Conifers in the Urban Landscape



Deodar cedar (Cedrus deodara) growing in a suburban setting; use of evergreen conifers can contribute to the plant species diversity of the urban environment.

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a result of insects and diseases that have included Chestnut Blight (*Cryphonectria parasitica*), Dutch Elm Disease (*Ophiostoma ulmi*), Asian Longhorned Beetle (*Anoplophora glabripennis*), and now Emerald Ash Borer (*Agrilus planipennis*). The more diverse the composition of an urban forest can be in terms of tree species, the more resilient it may be in the face of a disturbance like a pest invasion.

The need for diversification, however, doesn't just stop at the tree species level. Studies have shown that diversity at several different hierarchical levels across the urban landscape – including spatial distribution, plant functional type, structure, and age class – is of great benefit to the urban ecosystem. These factors all intermingle to help to create a complex urban forest system that supports efficiency and functionality. By adding evergreen conifers to the core fabric of the urban ecosystem, diversity is increased at each of these important levels, thereby lowering the risk of any single disturbance (e.g., snow or ice storm, drought, or the aforementioned pest outbreak) from devastating large portions of the urban forest by limiting the percentage of trees that could potentially be affected.

Another benefit derived from trees with dense, evergreen foliage is the associated wildlife habitat, thermal cover, and food resources that are made available during the winter. This helps to increase the presence of urban wildlife since there is often a dearth of suitable wildlife resources in the urban environment. Several species of birds that winter over in New England use the thermal cover afforded by conifers to take shelter during the harsh months. Birds, squirrels and other small mammals use the cones as food, and many of these same species use the thick foliage for cover during the breeding season.

Though their benefits are numerous, it is important to note that evergreen conifers do come with their own suite of insect and disease pests, as well as other concerns regarding their possible disservices, such as wintertime shading. Though these concerns should not preclude the use of evergreen conifers in urban areas, these are but a few of the distinctions that will need to be accounted for as communities and individuals choose to install more evergreen trees. Indeed, as with any type of tree, the positive attributes associated with their installation should be weighed against the negative ones to ensure that a properly informed planting selection has been made. By taking **into account 'Right Tree, Right Place,'** as well as the site objectives (e.g., rain-water interception, species diversity, microclimate management, etc.), the urban forester can indeed create a dynamic and diverse infrastructure system: the urban forest of the 21st century that includes a multitude of both deciduous and evergreen coniferous species.



Eastern hemlock (Tsuga canadensis) after a snowfall; benefits related to precipitation-interception can be realized year-round with evergreen conifers.

J. Casey Clapp earned his Master of Science Degree from the University of Massachusetts, Amherst, focusing on Arboriculture and Urban Forestry. He is an ISA Certified Arborist who has been working and studying in the field of urban forestry and arboriculture for five years and previously earned a Bachelor of Science in Forest Management from Oregon State University. He currently is working as a consulting arborist in Seattle, Washington. Richard W. Harper is the Extension Assistant Professor in the Department of Environmental Conservation at UMass-Amherst.

Species Spotlight—Sycamore, *Platanus occidentalis*

By Mollie Freilicher
MA-DCR
Community Action Forester



When all the leaves are gone (or nearly all of them—those stubborn oaks and beeches!) and the landscape takes on an austere quality, some trees emerge that really contribute to that starkness. Sycamore, also known as American planetree, buttonwood, or buttonball, is one of them. In winter, the white, exfoliating bark and craggy, spreading

form of sycamore become apparent. Sycamore is a native tree, most at home in bottomlands, along stream banks. It is in those locations that sycamore, one of the largest trees in the eastern United States, reaches its greatest size. Sycamore can reach heights of 60-100 feet, with a similar spread. The current [national champion](#) is in Highbanks Metropark, OH, with a height of 132 feet and a spread of 126 feet. In some parts of its range, sycamore also acts as a pioneer species of old fields, and it is used in the central and northeastern United States as a species for reclamation planting on coal-mining sites.



Its native range extends from southwestern Maine, south to Florida and the mountains of northeastern Mexico, west to Texas, and north to Nebraska. It is one of three species of planetree native to the United States. An additional five species are native to Mexico, and two, to Asia and Europe.

Sycamore has simple, large, alternate leaves that can range in size from four to nine inches wide, typically with three lobes with shallow sinuses. The margins are coarsely toothed and veins are hairy. Petioles are long, at three to five inches. During the growing season, leaves are medium-green and fall color is usually tan or brown. Twigs are zig-zag in form and have no terminal bud. Lateral buds are large, reddish, conical, with a single scale, and diverge from the stem at about 45 degrees. Ring scars appear at each node.

Toward the base of the tree and on older stems, the bark is gray-brown and scaly. On newer stems, the bark is thin and exfoliating, giving a mottled appearance as white, green, brown, tan, and gray patches are exposed.

This is sometimes referred to as “camouflage” bark and is a distinguishing feature of plane trees.

Sycamore, like other members of the planetree family, is



monoecious—both male and female flowers are on the same individual. Flowers appear in mid-spring, with the leaves, and are red and globose. They are not considered ornamental. They develop into a round syncarp (a fleshy aggregate fruit), made of multiple achenes. The fruits usually appear in groups of two, but sometimes occur in threes. The fruit ripens in the fall and persists through the winter, providing food for birds, including the purple finch, goldfinch, chickadee, and dark-eyed junco. Muskrats, beavers, and squirrels also eat the seeds, and owls, flycatchers, swifts, and wood ducks utilize cavities for nesting.

Wood from sycamore is strong and is used in furniture, **millwork, flooring, and butchers’ blocks, as well as for pulpwood, particleboard, and fiberboard.** The wood is similar to maple, although when flat-sawn, it is susceptible to warping, so quarter-sawn sycamore is preferable. R.S. Kellogg’s 1914, *Lumber and its Uses*, lists other uses for sycamore: barber poles, handles, merry-go-round horses and other merry-go-round parts, refrigerators, mandolin boxes, guitar bodies, and vehicles.

Sycamore has its fair share of insect and disease pathogens: anthracnose, leafspot, aphids, sycamore plant bug, sycamore lace bug, scales, and borers. Of these, sycamore anthracnose is perhaps the most serious because of the lasting impact. This fungus can cause leaf, shoot, and tip dieback; in bad anthracnose years, sycamores will lose their leaves prematurely. Repeated die-

back can cause the appearance of “witches brooms” at the branch tips as live and dead twigs accumulate. There are treatments, if conditions in the spring are suitable for the development of anthracnose. (Cool, rainy weather in spring.) There are cultivars of the hybrid London planetree (*Platanus x acerifolia*) that show resistance to anthracnose and might be better suited for tougher urban environments.

Sycamore requires a large area and planting should be reserved for open spaces where there is ample room for a tree to thrive and one where, perhaps, the appearance of witches brooms is acceptable. While sycamores do thrive in wet soils, they do not tolerate long periods of flooding. This native tree is a great addition to the landscape and will provide benefits for all forms of life.

Photos: Form: Huw Williams; Bark, flower, fruit, leaf, [Virginia Tech](#).



Growing on Trees

DCR Urban and Community Forestry Challenge Grants

Next Application Deadline: May 1, 2015

Challenge grants are 50-50 matching grants (75-25 for environmental justice projects) to municipalities and non-profit groups in Massachusetts communities of all sizes for the purpose of building local capacity for excellent urban and community forestry at the local and regional level.

The USDA Forest Service provides funding for the grant program, and DCR administers the grants with guidance from **the Massachusetts Tree Wardens' and Foresters' Association**. The DCR Urban and Community Forestry Program assists communities and nonprofit groups in their efforts to protect and manage community trees and forest ecosystems, **with the ultimate aim of improving the environment and enhancing the livability of all of Massachusetts's communities.**

For more information on the Challenge Grants (including our NSTAR Go Green grants and National Grid Partnership Grants, contact Julie Coop at 617-626-1468 or julie.coop@state.ma.us or Mollie Freilicher at 413-577-2966 or mollie.freilicher@state.ma.us or go to <http://www.mass.gov/eea/agencies/dcr/conservation/forestry-and-fire-control/urban-and-community-forestry-challenge-grants.html>.

2015 Massachusetts Arbor Day Poster Contest Trees are Champions in My Community!

Each year, over 1,500 Massachusetts fifth graders participate in the Arbor Day Poster Contest. The winners reap rewards, including art supplies, ice cream, and a tree for their school. **Each year there is a theme, such as "Trees are Terrific and Good for Our Health!" (2014) or "Celebrate a Tree" (2013), selected to encourage students to think about trees in new ways.**

The 2015 theme, Trees Are Champions in My Community!, is **designed to increase students' understanding of trees and the role trees play in their community.**

The deadline for this year's entries is April 1, 2015.

Instructions will be posted at - <http://www.mass.gov/eea/agencies/dcr/conservation/forestry-and-fire-control/branching-out-additional-programs.html>



2014 winner from Pittsfield.

2014 Tree City USA, Tree Campus, and Tree Line Application Information

Tree City USA

The Arbor Day Foundation's [online portal](http://www.mass.gov/eea/agencies/dcr/conservation/forestry-and-fire-control/branching-out-additional-programs.html) for Tree City USA applications is now accepting applications.

Application instructions are posted at: <http://www.mass.gov/eea/agencies/dcr/conservation/forestry-and-fire-control/branching-out-additional-programs.html>.

Tree Campus USA

Find out more about this program for colleges and universities and apply online at:

www.arborday.org/programs/treecampususa/

Tree Line USA

Information about Tree Line USA and application materials can be found at:

<http://arborday.org/programs/treeLineUSA/>

For questions about the application process or to find out how your community can become a Tree City USA, how your college or university can become a Tree Campus USA, or how your local utility can become a Tree Line USA, contact Mollie Freilicher, mollie.freilicher@state.ma.us 413-577-2966.

All applications deadline: December 31, 2014. If you haven't submitted your application already, contact Mollie Freilicher 413-577-2966.

From the Mass. Tree Wardens' and Foresters' Association

2015 Annual Conference

Tuesday-Wednesday • January 13-14, 2015

This 102nd conference features keynote speaker John Ball, well-known arborist safety advocate and Professor of Forestry at South Dakota State University.

The annual conference includes two days of educational sessions, networking opportunities, and the added benefit of continuing education credits for certified arborists, foresters, landscapers, and pesticide applicators. In 2014, there were certification credits for ISA, MCA, CTSP, MCLP, Mass. Licensed Forester, and state pesticide licenses.

Breaks with industry vendors in the Hawthorne Exhibit Hall always offer the opportunity to see the latest in gear, equipment, educational materials, and software. Many exhibitors generously donate door prizes that are awarded at the end of selected program sessions throughout the two days.

For more information, go to www.masstreewardens.org/annual-conference/

Scholarships

The Massachusetts Tree Wardens' and Foresters' Association awards approximately \$5,000 in scholarships each year to students who are actively studying arboriculture, community forest management, or urban forestry. An applicant must be either a student at the University of Massachusetts or—**new!**—a Massachusetts resident studying at an out-of-state college or university. The scholarship grants range from \$500 to \$1500 per student. Submission deadline for the [MTWFA 2015 Scholarship Application](#) is January 15. Scholarship award decisions are based on the applicant's financial need and on the achievement and maintenance of an acceptable grade point average in his or her field of study. Funding for the annual grants comes from the proceeds of the annual [Arbor Day Seedling Program](#).

Class 2 and Class 4 Hoisting Continuing Education Credit Courses from Baystate Roads

The Baystate Roads Program is offering a 2-hour Class 4 (G-B) and a 4-hour Class 2 (D-A) Hoisting courses. Both courses will be offered on the same day at each location. Individuals will have the opportunity to sign up for one or both courses. These courses are only being offered to Public Employees. Topics covered are all MGLs and CMRs as required by the Department of Public Safety, as well as operational guides for hoisting machinery. Although they are CEU courses, they are also an excellent way to prepare for the Massachusetts hoisting exam.

All students will need to provide their current Massachusetts Hoisting License number and a valid email address with registration.

2015 Course Dates and Locations:

January 9 - Cranwell Resort, 55 Lee Rd., Lenox, MA

January 30 - Sturbridge Host Hotel & Conference Center, 366 Main St., Sturbridge, MA

February 6 - Yarmouth Town Hall, 1146 Rte 28, South Yarmouth, MA

February 13 - Hotel Northampton, 36 King St., Northampton, MA

February 27 - Holiday Inn Taunton, 700 Myles Standish Blvd., Taunton, MA

March 6 - Marlborough Courtyard by Marriott, 75 Felton St., Marlborough, MA

March 13 - The Shaws Center, 1 Feinberg Way, Brockton, MA

March 20 - Crowne Plaza, 15 Middlesex Canal Park Dr., Woburn, MA

To find out more information and to register for these courses, please visit The Baystate Roads Program's ["Workshops" page](#), or call 413-577-2762.

Growing on Trees

Ecological Landscape Alliance Conference 2015

Sustaining the Living Landscape: The 21st Annual ELA Conference & Eco-Marketplace

February 25-26, 2015, MassMutual Center, Springfield, MA

[Download Brochure](#)

The 2015 conference program offers many well-known speakers who are experts in their fields. Topics include plant response to climate and land use changes, designing with rating systems (SITES, LEED, and Living Building Challenge), exploring new fertilizer regulations, innovative stormwater management, and much, much more.

Intensive Workshops: February 25

Workshop 1---From Seed to Success: Creating and Sustaining Dynamic Landscapes

Join us for an in-depth look at plants, including selection, management, diagnosing and addressing problems, and how plants function once in the landscape. From establishing plugs, to the dynamics of plant communities, our speakers and panelists will share their vast experience and diverse knowledge to take us beyond the basics and enable us to make better choices in our stewardship of the land.

Workshop 2—New Strategies for Water Conservation and Protection

Faced with increasing instances of drought and flooding and their detrimental effects on water quality, property and crop production, and native habitat, it is critical that we modify our landscape practices so that we stop contributing to the cause of these problems and become part of the solution. Learn the latest on the construction and performance of re-use and waste water systems, green infrastructure, and new regulations for fertilizers, as experts share their experiences with implementing new practices and design strategies to address the challenges of a changing and unpredictable climate.

Conference Sessions & Idea Exchange: February 26

Designing with Tree Preservation in Mind * SITES v2 – Rating System Guidelines and Performance Benchmarks * Locally Sourced: Growing Native Plants from Collected Seed * The Challenge of Residential Design & Rating Systems: A Case Study of the Gaddy House * The Buzz on Pollinators * The Built Landscape: Innovative Models and Tools of the Trade * What is the Right Plant? New Plant Palettes for a Changing Climate * Naturalizing Hardscapes: Creative Approaches to Transforming Harsh Urban Spaces

Idea Exchange Panel Discussions

Preventative Rx for the Landscape * Restoring the Urban Canopy: How Many Trees are Enough? * Plant Responses to Climate Change: What Can We Expect? * Designing within the Rating System

[Register online now to save with Early Registration Discounts](#) or register on site on February 25 or 26.

Continuing Education Credits

Pesticide credits have been requested from the six New England states, NY and PA. CEU credits have been re-requested from APLD, ASLA, ISA, LA CES, MAA, MLP, MNLA, NOFA OLCP, and others.

More information at www.ecolandscaping.org.

New England Grows

February 4-6, 2015, Boston, MA

Held every February, New England Grows is renowned for its world-class education offerings and innovative trend spotting. Founded in 1993 by green industry professionals for green industry professionals, the educational conference and exposition gives participants unique access to targeted, industry-specific products, information, education, and connections. The New England Nursery Association, Massachusetts Arborists Association, Massachusetts Association of **Landscape Professionals**, and **Massachusetts Nursery & Landscape Association** are the organization's founding partners. For more information and to register, go to <http://www.newenglandgrows.org/>.

Growing on Trees

Growing Greener—in Wilmington

In 2013, the town of Wilmington Department of Public Works produced a series of educational videos on a variety of tree issues affecting the town, such as winter moth, co-dominant stems, and hemlock wooly adelgid, among others. The videos, created by Tree Warden Jamie Magaldi, are a great way for the Tree Division to connect with residents. **These are linked from the Department's Tree Division webpage, which is full of other information for residents. Way to go Wilmington!** Watch the videos here: http://www.town.wilmington.ma.us/pages/WilmingtonMA_PublicWorks/tree (Scroll down for the link.)

Upcoming Symposium

Climate Change and the Future of Plant Life

Thursday, March 26, 2015, 9:00 a.m. to 4:30 p.m.

Microsoft New England Research and Development (NERD) Center

1 Memorial Dr #1, Cambridge, MA 02142

Save the Date! More information coming soon.

<http://www.newenglandwild.org/>

We do our best to ensure that listings are accurate, but please check with program organizers for the most up-to-date information.

Gleanings

Urban Wood Use

Check out this video from 1928 showing street trees in Detroit being sawn into logs and cordwood. <https://www.youtube.com/watch?v=R40h534YI8Y&feature=youtu.be>



Sustainable Urban Forestry

People Need Trees and Trees Need Care

Stockbridge School—UMass Summer School

July 13 - 17, 2015

In July 2014, the Arboriculture & Community Forestry program hosted its first Summer College course in *Sustainable Arboriculture*, the art, business, and science of caring for trees in our communities. Trees provide many benefits like shading houses and cleaning the air and water; they also improve our quality of life. Planting trees in our towns and cities is a great way to make them nicer places to live and work.

Students spent their time on campus learning all the basics of tree care. UMass faculty Professor Harper, Dr. Kane, and Dr. Ryan, taught classes in pruning, cabling, fertilizing, plant health care, tree identification, tree climbing, and pruning for seven hours a day, Monday through Friday, and the students really liked the class and how much they learned.

UMass will offer a one-week course again in July 2015.

The one-week intensive course is a balanced academic study of the science and business of arboriculture and

offers an introduction to the basic skills required to work in the field with trees.

In addition to offering a first-rate introduction to arboriculture to the high school students who participate, the organizers are hoping to recruit some of them to attend Stockbridge and UMass.

Arborists are in great demand in many towns and cities because it is important to properly plant and maintain trees. There are currently multiple career opportunities for graduates with either a two- or a four-year degree in Arboriculture & Urban Forestry from UMass-Amherst. Even if they choose not to attend Stockbridge, some students may enter the arboricultural workforce with good skills, or at least become better consumers of arboricultural services as adults.

Please visit <http://www.umass.edu/summer/precollege.html> and click on the link for "Urban Forestry" for more information.

Professional Societies and Associations

It's that time of year when membership applications are due for professional societies and associations. Joining is a great way to stay connected with the urban forestry community. We'll guide you through some of the local and national organizations that work in urban and community forestry.

Massachusetts Tree Wardens' and Foresters' Association

The Massachusetts Tree Wardens' and Foresters' Association

Association was founded in 1913 as a forum for municipal tree managers to share their concerns and to promote the preservation of public shade trees. In 2013, the mission expanded to encompass preservation of the entire urban and community forest. Members include tree wardens, city foresters, utility representatives, commercial arborists and companies, education professionals, and citizen tree advocates.

Activities include education, programs, and advocacy to achieve the following goals:

- well-trained, professional municipal tree wardens and foresters
- allocation of adequate fiscal resources to manage urban and community forests
- partnerships at all levels to work toward healthy trees and a healthy environment.

Events: Annual Conference, Professional Development Series, Webcasts.

For more information and how to join, go to:
www.masstreewardens.org

Massachusetts Arborists Association

The Massachusetts Arborists Association (MAA) is a professional trade organization that serves the commercial arboriculture industry. The MAA advances the goals of its tree service professional members through tree care education, research support, arborist certification, and promotion of the value of arboriculture to the public.

Founded in the late 1930s by leading tree care proponents, the MAA is proud to be one of the oldest arboriculture associations in the nation. The MAA's membership now includes more than 650 of the state's leading arborists, Massachusetts' tree service professionals.

In 1957, the MAA initiated a voluntary certification program and established the Massachusetts Certified Arborists Examining Committee. The title "[Massachusetts Certified Arborist](#)," through its comprehensive examination and continuing education requirement, has become the

symbol of tree care professionalism in Massachusetts. The Massachusetts Arborist Association is a member-driven organization which relies on its member volunteers.

Events: Monthly dinner meetings, Safety Saves program, MCA Exam

For more information and how to join, go to:
www.massarbor.org

Society of Municipal Arborists

Founded in 1964, the SMA is an organization of municipal arborists and urban foresters. The SMA membership also includes consultants, commercial firms, and citizens who actively practice or support some facet of municipal forestry.

A professional affiliate of the International Society of Arboriculture, the SMA has members from across North America and beyond. Through the magazine *City Trees*, SMA conferences, the website and the many active members, the SMA strives to create networking and educational opportunities that promote the sound, professional management of a vital and invaluable resource.

The SMA Mission is to lead the world in building the confidence, competence, and camaraderie of the family of professionals who create and sustain community forests.

Events: Annual Conference, Municipal Forestry Institute

For more information and how to join, go to:
www.urban-forestry.com

International Society of Arboriculture (national)

Through research, technology, and education, the International Society of Arboriculture (ISA) promotes the professional practice of arboriculture and fosters a greater worldwide awareness of the benefits of trees. The International Society of Arboriculture (ISA) has served the tree care industry for 90 years as a scientific and educational organization.

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Professional Societies and Associations

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Today, more than 20,000 International Society of Arboriculture members invite you to join them in support of an organization dedicated to you, the tree care professional. We encourage you to explore what we have to offer and consider what ISA membership could mean to you.

Events: Annual Conference, Workshops, Trainings, Symposia, Climbing Competitions, Tree Risk Assessment Qualification courses

For more information and how to join, go to:

www.isa-arbor.com



New England Chapter ISA

The New England Chapter of the International Society of Arboriculture (NEC-ISA) offers opportunities for professional development through educational workshops, trainings, public service, and events throughout New England. Through these professional activities, the NEC-ISA helps members enhance their technical proficiencies and stay abreast of technical and scientific developments in the field of arboriculture.

Goals of the NEC-ISA include

- Support and provide education in the art and science of arboriculture
- Improve the practice of tree preservation
- Stimulate a greater appreciation of shade trees for useful and aesthetic purposes
- Encourage and stimulate active participation with organizations and individuals having arboriculture interests
- Provide the public with up-to-date information on shade and ornamental trees
- Provide Arbor Day Grants.

Events: Annual Conference, Tree Climbing Competition, Workshops.

For more information and how to join, go to:

www.newenglandisa.org



Massachusetts Horticultural Society

The Massachusetts Horticultural Society (MHS) is dedicated to encouraging the science and practice of horticulture and developing the public's enjoyment, ap-

preciation, and understanding of plants and the environment.

The MHS, founded in 1829, is the oldest, formally organized horticultural institution in the United States. Providing information on horticulture and related sciences, it has disseminated this information through its Library, educational programming, exhibitions, and community outreach initiatives.

Since 2001, the headquarters of the Massachusetts MHS has been at Elm Bank, located on the town lines of Wellesley and Dover. The Society is supported by revenues generated by memberships (the organization currently has approximately 5,500 members), weddings and functions at our Elm Bank location, and by generous contributions from individuals, corporations, and foundations. **These funds support the Society's mission throughout Massachusetts and at the Gardens at Elm Bank.** MHS currently receives no government funding.

Events: A variety of events are held annually, see the website for details.

For more information and how to join, go to:

<http://www.masshort.org/>



Ecological Landscape Alliance (Formerly the Ecological Landscaping Association)

Founded in 1991, the Ecological Landscape Alliance (ELA) is a nonprofit, member-based organization made up of professionals, businesses, and pro-active community members who believe in using landscape practices that are environmentally safe and beneficial.

The ELA advocate for environmentally responsible stewardship of land and natural resources in landscaping and horticultural practices of both professionals and the public. Through education, collaboration, and networking, ELA promotes the design, installation, and maintenance of landscapes that are guided by a knowledge of, and respect for, natural ecosystems.

Events: Annual Conference, Workshops, Webcasts, Educational Programs.

For more information and how to join, go to:

<http://www.ecolandscaping.org/>

Professional Societies and Associations

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Massachusetts Nursery and Landscape Association

The Massachusetts Nursery & Landscape Association, Inc. (MNLA) is a statewide association dedicated to advancing the interests of green industry professionals. MNLA is a nonprofit organization whose members are businesses and individuals committed to promoting awareness of environmental horticulture and to upholding the highest standards of the nursery and landscape industry. MNLA is the largest green industry business development vehicle in Massachusetts, providing its members with educational opportunities, industry news, legislative representation, and business development resources. First established in 1910, MNLA has represented the needs of nursery and landscape professionals for more than 100 years.

Events: Annual Conference and Trade Show, Workshops, Plant Something Day, Mass. Certified Horticulturalist Exam

For more information and how to join, go to: <http://www.mnla.com/>

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New England Wildflower Society

Founded in 1900 as the Society for the Protection of Native Plants, New England Wild Flower Society is the nation's oldest plant conservation organization and a recognized leader in native plant conservation, horticulture, and education. The Society's headquarters, Garden in the Woods, is a renowned native plant botanic garden in Framingham, Massachusetts, that attracts visitors from all over the world. From this base, 25 staff and more than 700 volunteers work throughout New England to monitor and protect rare and endangered plants, collect and preserve seeds to ensure biological diversity, detect and control invasive species, conduct research, and offer a range of educational programs. The Society also operates a native plant nursery at Nasami Farm in western Massachusetts and has seven sanctuaries in Maine, Massachusetts, New Hampshire, and Vermont that are open to the public.

Events:

Workshops, Demonstrations, Educational Courses, Certificate in Field Botany or Native Plant Horticulture and Design

For more information and how to join, go to: <http://www.newenglandwild.org/>

News

Insects Play Important Role In Dealing With Garbage On NYC Streets

December 2, 2014—In the city that never sleeps, it's easy to overlook the insects underfoot. But that doesn't mean they're not working hard. A new study from North Carolina State University shows that insects and other arthropods play a significant role in disposing of garbage on the streets of Manhattan. "We calculate that the arthropods on medians down the Broadway/West St. corridor alone could consume more than 2,100 pounds of discarded junk food, the equivalent of 60,000 hot dogs, every year -- assuming they take a break in the winter," says Dr. Elsa Youngsteadt, a research associate at NC State and lead author of a paper on the work. Read the full story at [ScienceDaily](http://ScienceDaily.com).

Researchers Discover Natural Resistance Gene Against Spruce Budworm

Nov 21, 2014—Scientists from Université Laval, the University of British Columbia, and the University of Oxford have discovered a natural resistance gene against spruce budworm in white spruce. The breakthrough, reported in *The Plant Journal*, paves the way to identifying and selecting naturally resistant trees to replant forests devastated by the destructive pest. Read the full story at phys.org.

News

In a Queens Forest, Compiling a Picture of Urban Ecology

By Lisa W. Foderaro

December 2, 2014—Deep in the woods at [Alley Pond Park](#) in Queens is a laboratory that looks like **something out of a weather fanatic's wild imagination**. Attached to a lofty oak are a webcam and a wind vane, humidity and temperature sensors, rain gauges, and instruments to measure solar radiation. The high-tech tools, which transmit information in real time, are part of the [United States Forest Service's](#) new "smart forest" initiative, in which data is collected from selected woodlands to help scientists manage landscapes in a changing climate. At 635 acres, Alley Pond Park, at the head of Little Neck Bay, is the first urban forest to be included in the current crop of a half-dozen wired forests across the Northeast. And despite its location in one of the most populous and developed corners of the country, its natural features remain intact, including freshwater and saltwater wetlands, tidal flats, meadows, and forests. The data collection began in 2011, when researchers at Drexel University teamed up **with the city's parks department to study the sylvan nook inside the park, along with two other engineered green spaces in the city designed to capture storm-water runoff.** But the [Forest Service](#) has now added Alley Pond Park to its [Smart Forest Network](#). Read the full story at [The New York Times](#).

Warmer Temperatures Limit

Impact of Parasites, Boost Pest Populations

November 19, 2014—Climate change is expected to disrupt ecosystems by changing the life cycles of insects and other organisms in unpredictable ways -- and scientists are getting a preview of these changes in cities. Research from North Carolina State University shows that some insect pests are thriving in warm, urban environments and developing earlier, limiting the impact of parasitoid wasps that normally help keep those pest populations in check. At issue is something called a "phenological mismatch," which occurs when the timing of life stages for one organism change in relation to the timing of life stages for other, associated species. In other words, species that once had synchronized life cycles are no longer synchronized. Read the full story at [ScienceDaily](#).

The Battle Against The Winter Moth

By Andrea F. Carter

December 14, 2014—This time of year the winter moths come out. They can be seen fluttering in car headlights, pasted against window panes, and climbing tree trunks to **lay their eggs. "They pick up in concentration in the first few weeks of December,"** said Joseph Elkinton of the University of Massachusetts Amherst, who has led efforts **to control this pest for the past ten years. "We are in the peak time now."** The moth, *Operophtera brumata*, however, is an unwanted guest and is considered an infestation by scientists. In New England, its range spreads as far north as Maine and as far south as Connecticut. Although they may be abundant yet harmless in the winter, the eggs they lay, and the caterpillars that hatch from them, can be deadly to trees (and shrubs) in the spring. The caterpillars munch on the emerging buds, defoliating the trees and shrubs, before entering their pupal stage where they develop into an adult moth. Repeated years of this type of abuse can kill plants over time, Dr. Elkinton said. Read the full story at [capenews.net](#).

Restored Forests Breathe Life Into Efforts Against Climate Change

By Justin Gillis

Dec. 23, 2014—La Virgen, Costa Rica — Over just a few decades in the mid-20th century, this small country chopped down a majority of its ancient forests. But after a huge conservation push and a wave of forest regrowth, trees now blanket more than half of Costa Rica. Far to the south, the Amazon forest was once being quickly cleared to make way for farming, but Brazil has slowed the loss so much that it has done more than any other country to limit the emissions leading to global warming. And on the other side of the world, in Indonesia, bold new promises have been made in the past few months to **halt the rampant cutting of that country's forests, backed by business interests with the clout to make it happen.** Read the full story at the [New York Times](#).

On the Horizon

- Jan 13-14 **Mass Tree Wardens' and Foresters' Association Annual Conference**, Sturbridge, MA, www.masstreewardens.org
- Feb 4-6 New England Grows, Boston, MA, www.newenglandgrows.org
- Feb 22-27 Municipal Forestry Institute, Portland, OR, www.urban-forestry.com
- Feb 24-27 American Society of Consulting Arborists 2015 Consulting Academy, Boston, MA, www.asca-consultants.org/
- Feb 25 **Urban Forestry Today Webcast: "Structural Soil: An Introduction and Update"** (Nina Bassuk), Details TBA
- Feb 25-26 ELA Conference & Eco-Marketplace, Springfield, MA, www.ecolandscaping.org
- Mar 10 UMass Community Tree Conference, Amherst, MA, www.umassgreeninfo.org
- Mar 26 Symposium: Climate Change and the Future of Plant Life, Cambridge, MA, www.newenglandwildflower.org
- Mar 26 Pollinator Health for Agriculture and Landscapes, UMass Amherst, www.umassgreeninfo.org

- April 1 Deadline: Intent to Apply DCR [Urban and Community Forestry Challenge Grant](#)
- April 24 Arbor Day in Massachusetts
- May 1 Deadline for Applications: [Urban and Community Forestry Challenge Grants](#)



Tree City, Tree Campus, and Tree Line Applications were due December 31, 2014. For information, contact [Mollie Freilicher](#), 413-577-2966

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If you have a topic you'd like to see covered or want to submit an item to *The Citizen Forester* (article, photo, event listing, etc.), please contact [Mollie Freilicher](#) or click [here](#).

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